SCREENING SITE INSPECTION WORK PLAN
FOR
WEST 78th CIRCLE SITE
BLOOMINGTON, MN
U.S. EPA ID: MND980995872
SS ID: NONE
TDD: F05-8706-169
PAN: FMN0172GA

JANUARY 19, 1989

Elements of this Screening Site Inspection Work Plan are considered confidential and pre-decisional in nature. Material and information contained within this report may not be released without the approval of the United States Environmental Protection Agency Region V Pre-Remedial Unit.

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

5HR-11

Mr. Ron Swenson
Site Response Section
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155

Site Name: WEST 78TH CIRCLE SITE

Location: BLOOMINGTON, MN

Identification No. MND980995872

Date: 1-23-89

Dear Mr. Swenson:

Attached is a copy of the site inspection work plan which has been prepared for the site listed above. This document is considered to be draft and subject to changes and modifications based on actual conditions which may be encountered at the site.

Because this is considered to be a draft document, it should be for official use only and should not be distributed outside of your agency without prior notification and approval of the U.S. Environmental Protection Agency.

The document also contains a preliminary estimate of the Hazard Ranking System (HRS) score for the site and a project score based on specific assumptions as addressed in the work plan. This information is considered predecisional. Therefore, it should not be released. Your field and district staff especially should be made aware of the predecisional nature of this score, the legal implications of releasing it relative to the National Priorities List (NPL) candidacy process, and therefore the need not to release any score. If you have any questions concerning release of this information, please contact Ms. Jeanne Griffin, of my staff, at (312) 886-3007.

If you have any comments on the work plan itself, please contact Mr. Charles Castle, of my staff, at (312) 886-5892, within eight calendar days. If we do not receive any comments written or verbal from you, then we will assume that the work plan is acceptable.

Please note that site inspections are carried out under CERCLA to determine if a site will make the NPL. Thus, extra sampling or other activities that serve only a State purpose should not be requested. We welcome suggestions based on the knowledge of you and your staff that will make for a better site inspection for NPL candidacy purposes.

Please talk with Mr. Castle as early within the eight-day period as possible in order that your suggestions can be evaluated and modifications made.

Sincerely yours,

Thomas F. Geishecker

Thomas F. Geishecker, Chief
Program Support Section

Enclosure

MPCA Staff Comments On Screening Site Inspection Work Plan Prepared By E & E

Site Name: West 78th Circle Site

Location: Bloomington, Minnesota

Identification Number: MND980995872

Date Plan Received: January 24, 1989

MPCA Reviewer: Meri K. Lapp

1. To adequately sample the Site, the five soil samples proposed for "unpaved areas near the restaurant" must be taken beneath any fill that is present. In general, two to five feet of fill is present on all Sites in the area.

2. When sampling the industrial and production wells it is important to realize that there are several other documented sources of ground water contamination in the area. Specifically, Aztec Industries and the France Avenue Drive Inn Dump.

3. The HRS score is based upon a municipal well located 1.5 miles from the Site. For this reason, the municipal well should be sampled along with the industrial and production wells.

MPCA Staff Comments On Screening Site Inspection Work Plan Prepared By E & E

Site Name: West 78th Circle Site

Location: Bloomington, Minnesota

Identification Number: MND980995872

Date Plan Received: January 24, 1989

MPCA Reviewer: Meri K. Lapp

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WORK PLAN

SITE INSPECTION WORK PLAN

THIS DOCUMENT IS CONFIDENTIAL. Due to the predecisional nature of this document, this document and its attachments are not to be released without prior approval of the United States Environmental Protection Agency (U.S. EPA).

This site inspection work plan (WP) has been prepared by Ecology and Environment, Inc., or its subcontractor, C. C. Johnson and Malhotra, P.C., under the field investigation team (FIT) contract with U.S. EPA (No. 68-01-7347).

The objectives of this WP are to:

- Prepare a preliminary Hazard Ranking System (HRS) score using HRS 1 (40 CFR 300, July 16, 1982) criteria based on existing file information (Part C of WP);
- Prepare projected HRS 1 scores based on experience and professional judgement (Part C of WP);
- Provide HRS factor values using the revised HRS 2 (Federal Register proposed date, April 1988) criteria (Part D of WP);
- Identify HRS 1 score data gaps (Part F of WP); and
- Propose site inspection activities to satisfy the HRS 1 score data gaps; technical approach and estimated LOE are provided (Parts F and J, respectively).

Unless otherwise stated, QA/QC protocol for site inspection activities are documented in the Quality Assurance Project Plan Region V FIT Conducted Site Inspections - May 1, 1987.

Note: This Work Plan has been prepared following the HRS model currently in use. Revisions will be made to bring the WP in agreement with the revised HRS requirements after promulgation in October 1988.

A. GENERAL INFORMATION

CERCLIS SITE NAME: WEST 78TH CIRCLE SITE
ALSO KNOWN AS:
FORMERLY KNOWN AS:
ADDRESS: 4470 W. 78TH ST.
CITY: BLOOMINGTON
STATE: MN
COUNTY: HENNEPIN
ZIP CODE: 55435
U.S. EPA ID: MND980995872
SSID: NONE
TDD: F05-8706-169
PAN: FMN0172GA-

FIT USE ONLY

WORK PLAN TYPE: X SCREENING SITE INSPECTION (SSI) WORK PLAN

____ OTHER: _____

PREPARED BY: Daniel Sullivan (FIT) DATE: 10-21-88

REVIEWED BY: Kurt Kind (FIT) DATE: 10-28-88

APPROVED BY: M. Martin (FIT) DATE: 1/23/89

U.S. EPA USE ONLY

REVIEWED BY: _____ (U.S. EPA) DATE: _____

___ WORK PLAN APPROVED. Recommend issuance of TDD to implement the Work Plan.

___ WORK PLAN APPROVED. No Further Remedial Action Planned (NFRAP).

___ WORK PLAN REJECTED.

COMMENTS: _____

B. SITE INFORMATION

This section of the WP presents current and historic information pertaining to the site, including: site operations, storage/disposal methods, site property area, site status, owners and operators, permit information, and response/enforcement activities. A site location map is shown on Figure 1, located in Section 2.

1. Site Operations (past and present; check all that apply):

____	Above ground storage	____	Mining site
____	Below ground storage	____	Open dump
____	Chemical manufacturer	____	Ore processor
____	Drum recycler	____	Physical/chemical treament
____	Electroplater	____	Recycler/reclaimer
____	Foundry	____	Surface impoundment
____	Incinerator	____	Underground injection
____	Landfarm	____	Well field
____	Landfill	____	Wood preserver
____	Midnight dump	X	Other: RESTAURANT

References: 3, 7, _____, _____, _____

2. Storage/Disposal Methods (past and present; check all that apply):

		Waste Quantity (amount/units of measure)
____	Drums, above ground	_____
____	Landfarm	_____
____	Landfill	_____
____	Open dump	_____
____	Piles	_____
____	Surface impoundment	_____
____	Tank, above ground	_____
____	Tank, below ground	_____
X	Other: BURIED PAILS	~ 150 GALLONS

References: 3, _____, _____, _____, _____

3. Site Property Area: UNKNOWN (acres)

References: _____, _____, _____, _____, _____

4. Site Status: X Active _____ Inactive

References: 3, _____, _____, _____, _____

5. Owner/Operator History

Current Owner

Name: SAGA CORPORATION
Address: 200 2ND AV. W
City, State, Zip Code: SEATTLE, WA 98119
Years of Ownership: _____

Current Operator

Name: SAME AS OWNER
Address: _____
City, State, Zip Code: _____
Type of Operation: _____
Years of Operation: _____

Previous owners (list most recent first)

Name: UNKNOWN
Address: _____
City, State, Zip Code: _____
Years of Ownership: _____

Previous operators (list most recent first)

Name: _____
Address: _____
City, State, Zip Code: _____
Type of Operation: _____
Years of Operation: _____

Name: _____
Address: _____
City, State, Zip Code: _____
Years of Ownership: _____

Name: _____
Address: _____
City, State, Zip Code: _____
Type of Operation: _____
Years of Operation: _____

References: 3, _____, _____, _____, _____

6. Permit Information

		Effective Date	Expiration Date
___	NPDES	_____	_____
___	UIC	_____	_____
___	AIR	_____	_____
___	RCRA, ___ PART A ___ PART B	_____	_____
___	SPCC PLAN	_____	_____
___	STATE (specify): _____	_____	_____
___	LOCAL (specify): _____	_____	_____
___	OTHER (specify): _____	_____	_____
X	NONE KNOWN		

References: _____, _____, _____, _____, _____

7. Response Activities (previous and current site remediation; check all that apply):

_____ Water supply closed	_____ Cutoff trenches/sump
_____ Temporary water supply provided	_____ Subsurface cutoff wall
_____ Permanent water supply provided	_____ Barrier wall constructed
_____ Spilled material removed	_____ Capping/covering
_____ Contaminated soil removed	_____ Bulk tankage repaired
_____ Waste repackaged	_____ Grout curtain constructed
_____ Waste disposed elsewhere	_____ Bottom sealed
_____ On-site burial	_____ Gas control
_____ In situ treatment	_____ Fire control
_____ Encapsulation	_____ Leachate treatment
_____ Emergency waste treatment	_____ Area evacuated
_____ Cutoff walls	_____ Access to site restricted
_____ Emergency diking/surface water diversion	_____ Population relocated

Other remedial and enforcement activities: UNKNOWN CONTAMINATED SOIL BACKFILLED, LEVELED & PAVED OVER AS A PARKING LOT.

References: _____, _____, _____, _____, _____

8. Additional Site Information: THE 78TH CIRCLE SITE WAS PURCHASED BY THE SAGA CORP. FOR THE CONSTRUCTION OF A RESTAURANT. THE SITE ABUTS AZTEC INDUSTRIES TO THE N.E., A FORMER SITE UNDER INVESTIGATION BY THE MPCA. APPROXIMATELY 25 FIVE-GALLON PAILS OF A DARK VISCOUS MATERIAL WERE UNCOVERED DURING THE INSTALLATION OF UTILITIES. MOST OF THE CONTAMINATED SOIL AND LEAKING PAILS WERE BACKFILLED INTO THE TRENCH. THE REMAINING PILE OF CONTAMINATED SOIL, WITH ~5 PAILS OF MATERIAL, WAS SPREAD OVER THE SURFACE, AND THE SURFACE PAVED OVER. THE PAILS WERE DISPOSED OF IN A DUMPSTER.

References: 3, _____, _____, _____, _____

9. Documented and Alleged Target Compounds

Documented and alleged target compounds are compiled in Table 1. The documented target compounds are supported by analytical data from previous sampling projects. The alleged target compounds are based on the history of site operations and professional judgement. Documented and alleged target compound locations are shown on Figure 2, located in Section 2.

LOCATION	CMPND STATUS: DOCU	CMPND STATUS: ALLEG	MATRIX (✓): SOIL	SED	GW	SW	AIR	WSTE	OTHR	DOCUMENTED COMPOUND AND CONCENTRATION OR ALLEGED COMPOUND AND RATIONALE	REFERENCE
		X	X							PCBs 28.9 PPM	3
		X	X							TOLUENE 94.0 PPB	3
		X	X							M-XYLENE 140.0 PPB	3
		X	X							1,1,2-TRICHLOROETHYLENE 8500.0 PPB	3

Table 1
DOCUMENTED/ALLEGED TARGET COMPOUND LIST

C. PRELIMINARY/PROJECTED HRS SCORES

The purpose of this section is to:

- o Prepare a preliminary HRS 1 score based on existing file information; and
- o Prepare projected HRS 1 scores based on experience and professional judgement.

PRELIMINARY HRS SCORE (this score is based on existing file information that was obtained prior to the screening site inspection):

S_M = 0 S_{FE} = 0 S_{DC} = 0

PROJECTED HRS SCORE FOR A SCREENING SITE INSPECTION (this score is based on the expected acquisition of information from the screening site inspection):

S_M = 11.21 S_{FE} = 0 S_{DC} = 0

PROJECTED HRS SCORE FOR A LISTING SITE INSPECTION (this score is based on the expected acquisition of information from the Listing Site Inspection):

S_M = 33.62 S_{FE} = 0 S_{DC} = 0

HRS 1 score worksheets are located in Section 3.

D. HRS 2 FACTOR SCORE

The HRS 2 factor values were computed using HRS 2 (Federal Register proposed date, April 1988) criteria. The HRS 2 factor value criteria were developed to reflect anticipated key HRS 2 scoring issues. The HRS 2 factor values have been calculated using available file information.

Factor	Factor Score		Observed Human Exposure (X)
Waste Characteristics	0	(100)	
Air Pathway	32.20	(100)	
Groundwater Pathway	53.22	(100)	
Surface Water Pathway	0	(100)	
On-site Pathway	70.00	(100)	
TOTAL HRS 2 FACTOR VALUE	155.42	(500)	

HRS 2 factor value worksheets are located in Section 3.

E. WORK SUMMARY

Based on the preliminary and projected HRS scores, a site inspection will be performed.

The objectives of the site inspection are to:

- o Provide information to satisfy HRS data gaps;
- o Develop the information base needed to permit U.S. EPA to evaluate the need for future site activities; including: immediate removal measures, additional investigation, or no further action; and
- o Characterize hazardous substances, pollutant dispersal pathways, types of receptors, facility management practices, and potentially responsible parties.

Specific tasks to be conducted during the site inspection are (check all that apply):

- [X] Interview site owner(s)/representative(s)
- [X] Take photographs of site and surrounding areas
- [X] Screen site with safety instrumentation (i.e.,HNU, OVA, O_2 meter, explosimeter, radiation detector, cyanide detector)
- [X] Collect environmental samples
- [X] Assess the need for Immediate Removal Actions
- [ ] FASP*
- [ ] Soil gas monitoring*
- [ ] Well point installation*
- [ ] Geophysics*: _____ (Specify)
- [ ] OTHER*: _____

* Rationale for these activities and their impact on HRS data gaps:

F. PROPOSED SAMPLE PLAN

The HRS data gaps are identified in this section, and a proposed sample plan is developed based on the type of information required.

1. A) HRS data gap(s): WASTE CHARACTERISTICS

B) Sampling proposed to satisfy HRS data gap(s):

X Soil ____ Sediment ____ GW ____ SW ____ Air ____ Waste

C) Sampling procedures (number and types of samples; equipment; methodology): COLLECT FIVE SOIL SAMPLES FROM UNPAVED AREAS NEAR THE RESTAURANT. ONE OF THE SAMPLES WILL BE A BACKGROUND SAMPLE. COLLECT SAMPLES, COMPLETE PAPERWORK, PACKAGE SAMPLES, AND SHIP TO LAB MAINTAINING CHAIN-OF-CUSTODY AT ALL TIMES.

A table of proposed sample descriptions is presented in Table 2, Section 1. A proposed sample location map is presented in Figure 3, in Section 2.

2. A) HRS data gap(s): GROUNDWATER CHARACTERISTICS

B) Sampling proposed to satisfy HRS data gap(s):

____ Soil ____ Sediment X GW ____ SW ____ Air ____ Waste

C) Sampling procedures (number and types of samples; equipment; methodology): COLLECT THREE INDUSTRIAL/PRODUCTION WELL SAMPLES FROM FACILITIES NEAR THE SITE IN ORDER TO DETERMINE GROUNDWATER CHARACTERISTICS. COLLECT SAMPLES, COMPLETE PAPERWORK, PACKAGE SAMPLES, AND SHIP TO LAB MAINTAINING THE CHAIN-OF-CUSTODY AT ALL TIMES.

A table of proposed sample descriptions is presented in Table 2, Section 1. A proposed sample location map is presented in Figure 3, in Section 2.

Note: Sample locations and/or the number of samples may be changed or eliminated at the discretion of the site team leader in response to actual site conditions during the course of the inspection.

F. PROPOSED SAMPLE PLAN (Continued)

The HRS data gaps are identified in this section, and a proposed sample plan is developed based on the type of information required.

3 A) HRS data gap(s): AIR ROUTE., SURFACE WATER CONTAMINATION.

B) Sampling proposed to satisfy HRS data gap(s):

____Soil ____Sediment ____GW ____SW ____Air ____Waste

C) Sampling procedures (number and types of samples; equipment; methodology): NO AIR SAMPLING WILL BE CONDUCTED AT THIS TIME. NO SURFACE WATER SAMPLING WILL BE DONE AT THIS TIME.

A table of proposed sample descriptions is presented in Table 2, Section 1. A proposed sample location map is presented on Figure 3, in Section 2.

___ A) HRS data gap(s): _____

B) Sampling proposed to satisfy HRS data gap(s):

____Soil ____Sediment ____GW ____SW ____Air ____Waste

C) Sampling procedures (number and types of samples; equipment; methodology): _____

A table of proposed sample descriptions is presented in Table 2, Section 1. A proposed sample location map is presented in Figure 3, in Section 2.

Note: Sample locations and/or the number of samples may be changed or eliminated at the discretion of the site team leader in response

LOCATION	MATRIX (✓)							RATIONALE FOR DETERMINING SAMPLE LOCATION	PARAMETERS[1]					
	SOIL	SED	GW	SW	AIR	WSTE	OTHR		A/B/N	Pest/ PCB	VOA	METAL	CN^-	OTHER
S1	X							BACKGROUND SAMPLE	X	X	X	X	X	
S2	X							WASTE CHARACTERISTICS	X	X	X	X	X	
S3	X							↓	X	X	X	X	X	
S4	X								X	X	X	X	X	
S5	X							↓	X	X	X	X	X	
W1			X					GROUNDWATER CHARACTERISTICS	X	X	X	X	X	
W2			X					↓	X	X	X	X	X	
W3			X					↓	X	X	X	X	X	
DUPLICATE			X					DUPLICATE SAMPLE (W2)	X	X	X	X	X	
BLANK							X	BLANK (DISTILLED WATER)	X	X	X	X	X	
TOTALS	5		4				1		10	10	10	10	10	

[1] Target Compound List Attached

Table 2
PROPOSED SAMPLE DESCRIPTIONS
(INCLUDING ALL LABORATORY BLANKS AND DUPLICATES)

G. COMMENTS

H. HEALTH AND SAFETY

Proposed E & E Health and Safety protocol to be followed during site inspection.

1. Anticipated level of protection: ____ A ____ B ____ C X D

2. Level of protection modifications: LEVEL D WITH POSSIBLE UPGRADE TO LEVEL C

3. Work limitations (time of day, etc.): WORK DURING DAYLIGHT HOURS ONLY. MONITOR FOR HEAT/COLD STRESS. MAINTAIN THE BUDDY SYSTEM AT ALL TIMES.

I. TYPE OF DELIVERABLE

Proposed report format to be submitted to U.S. EPA.

1. X SSI Report including U.S. EPA 2070-13 Form
2. ___ Letter Report

	SUBTASK																				
SUBTASK CODE	General Non-Specific	File Search/Review	Work Plan	Safety Plan	QAPP	Mobilization/Demobilization	Travel	Non-Sampling Field Work	Sample Management	Field Sampling	Screening/Analytical	Subcontract	Meteorologic/Air Sampling Studies	Geophysical Work	Hydrogeological Work	Data Processing/Modelling	Data Validation	Draft Final Deliverable	Internal QA Review	Final Deliverable	Respond To Comments	
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	TOTAL
TEAM LEADER	12	12		8		4	16			8								60		20	8	148
SAFETY OFFICER						4	16			8												28
SAMPLER							16		14													30
TEAM MEMBER						4	16			8												28
TEAM MEMBER						4	16			8												28
ADMIN/SAMPLE COORD	2								4													6
EDIT/PUBLICATION	2																	15		5		22
QA/DATA REVIEW/HEALTH				8													10		25			43
TOTALS FOR PROJECT	16	12		16		16	80		18	32							10	75	25	25	8	350

J. ESTIMATED LOE HOURS

SUMMARY OF PROJECTED HOURS NEEDED TO IMPLEMENT
SITE INSPECTION AND COMPLETE SITE INSPECTION REPORT.

SITE MAPS

SITE MAPS

1. SITE LOCATION MAP (TOPO)

2. DOCUMENTED/ ALLEGED TARGET COMPOUND MAP

3. PROPOSED SAMPLE LOCATION MAP

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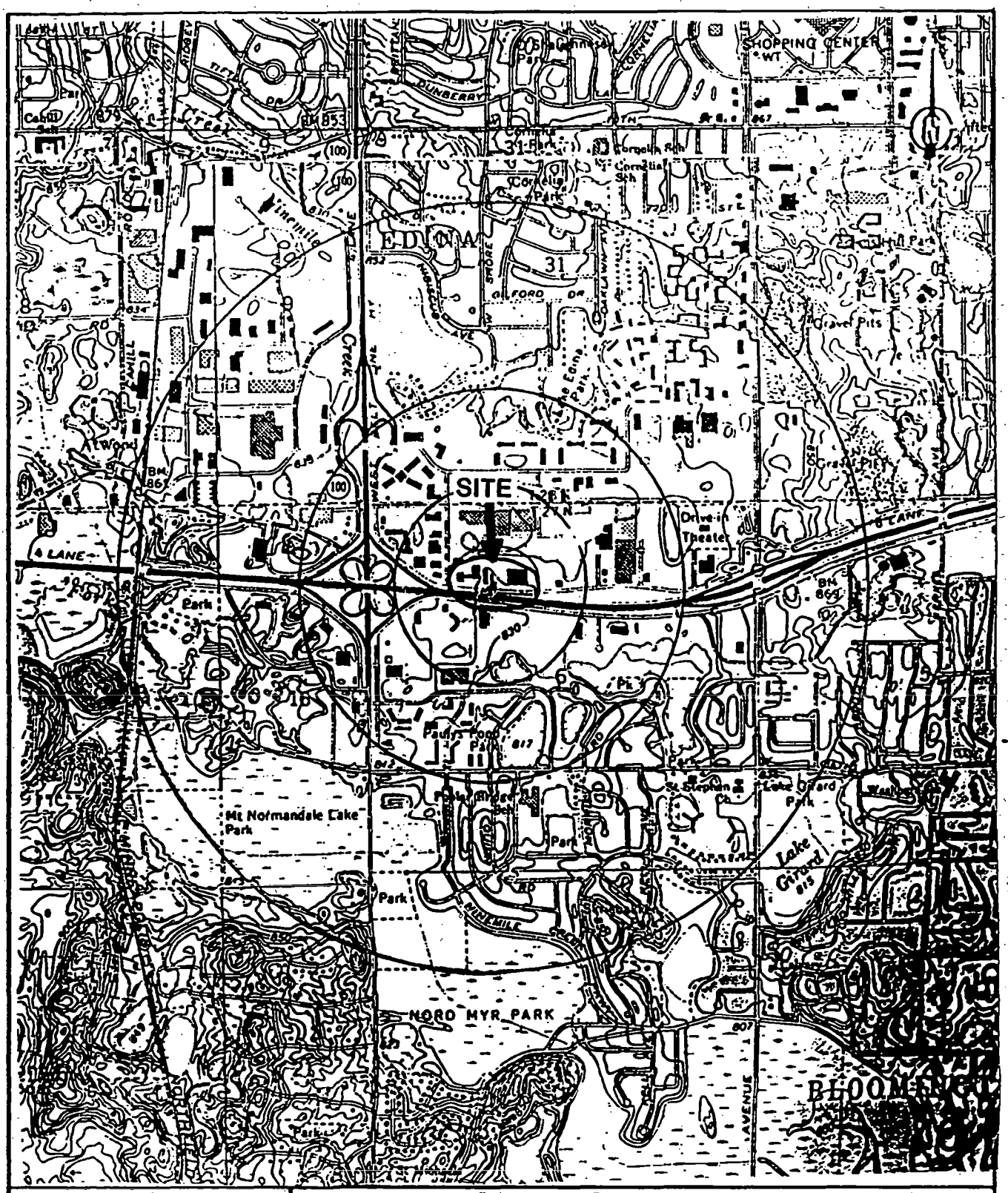
TITLE	FIGURE #
SITE	SCALE
CITY STATE	P.A.N.
SOURCE	DATE REVISED



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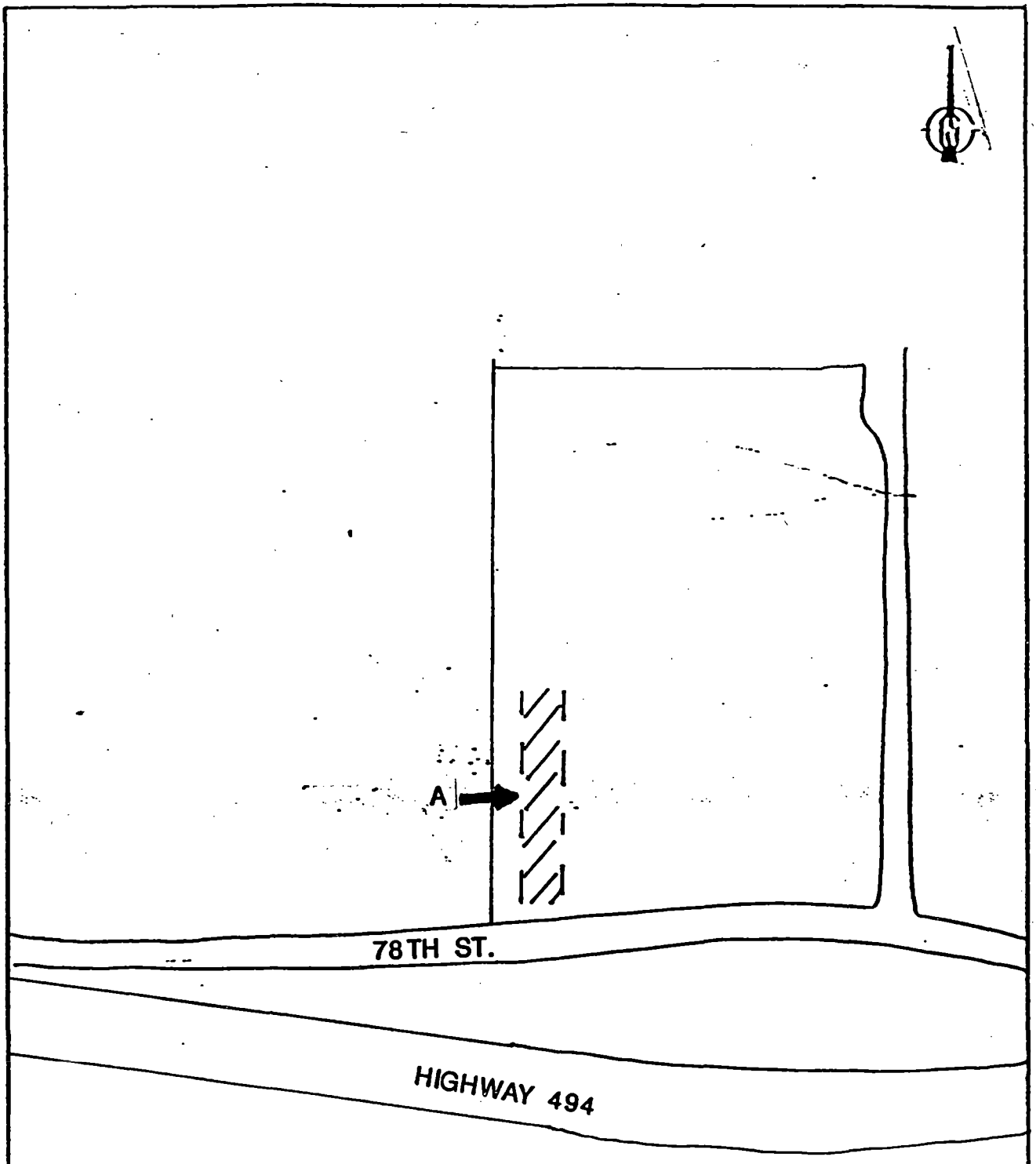
QUADRANGLE LOCATION

TITLE: SITE LOCATION MAP	FIGURE #: 1
SITE: WEST 78TH CIRCLE SITE	SCALE: 1:24000
CITY: BLOOMINGTON STATE: MN	P.A.#N.: FMN0172GA
SOURCE: USGS BLOOMINGTON, MN QUAD	DATE: 1967 REVISED: 1980



LEGEND

- DOCUMENTED AREA OF CONTAMINATION
- ALLEGED AREA OF CONTAMINATION
- DOCUMENTED WELL CONTAMINATION
- ⊘ ALLEGED WELL CONTAMINATION
- ○ DOCUMENTED UNCONTAMINATED WELL
- (A) LETTERED ITEMS CORRESPOND

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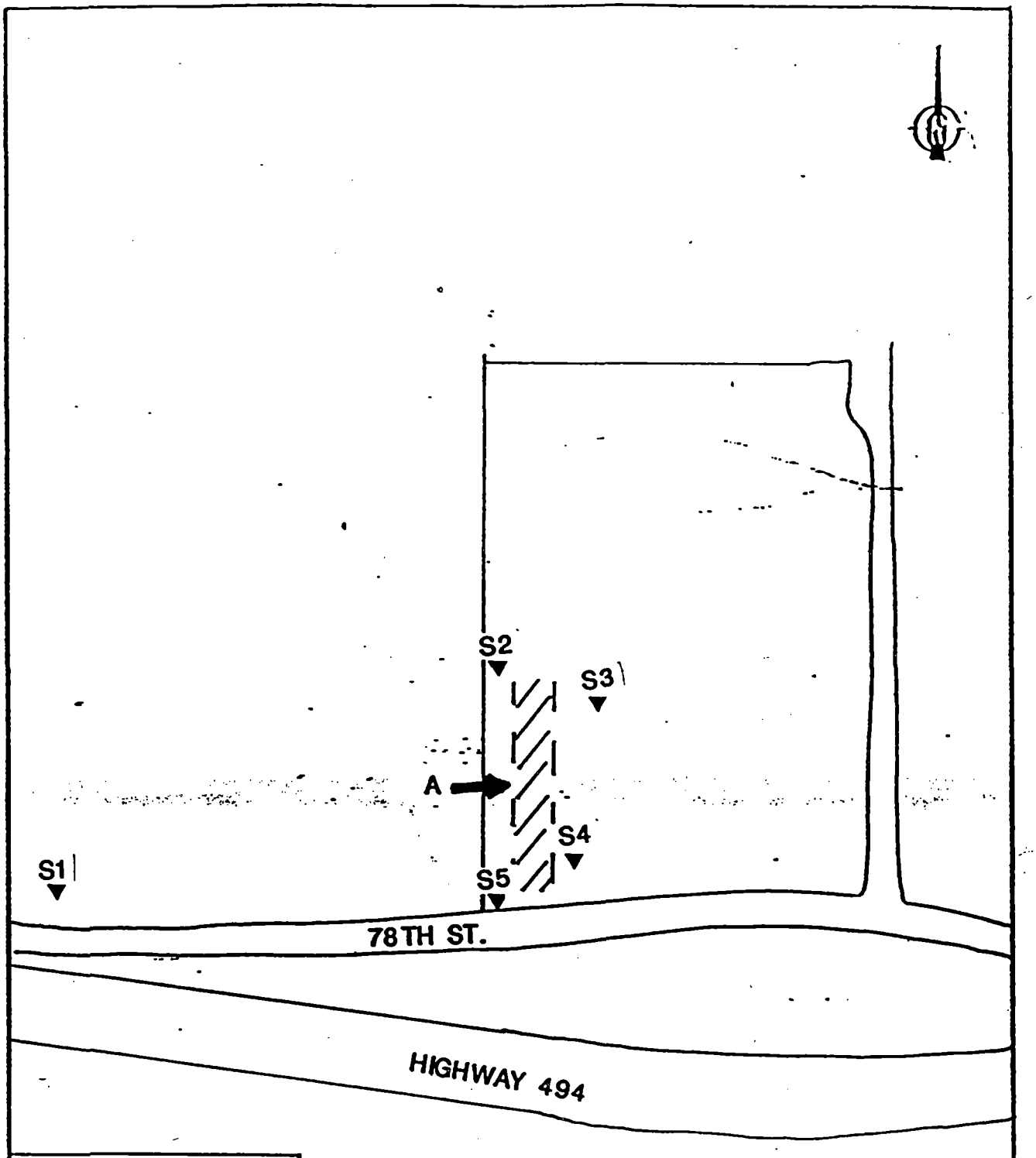
TITLE: DOCUMENTED/ALLEGED TARGET COMPOUND MAP	FIGURE #: 2
SITE: WEST 78TH CIRCLE SITE	SCALE: N/A
CITY: BLOOMINGTON STATE: MN	P.A.N.: FMN0172GA
SOURCE: MPCA	DATE:



LEGEND

- ▼ SOIL
- ▨ ALLEGED AREA OF CONTAMINATION
- ● DOCUMENTED WELL CONTAMINATION
- ⊘ ALLEGED WELL CONTAMINATION
- ○ DOCUMENTED UNCONTAMINATED WELL
- (A) LETTERED ITEMS CORRESPOND TO TABLE 1

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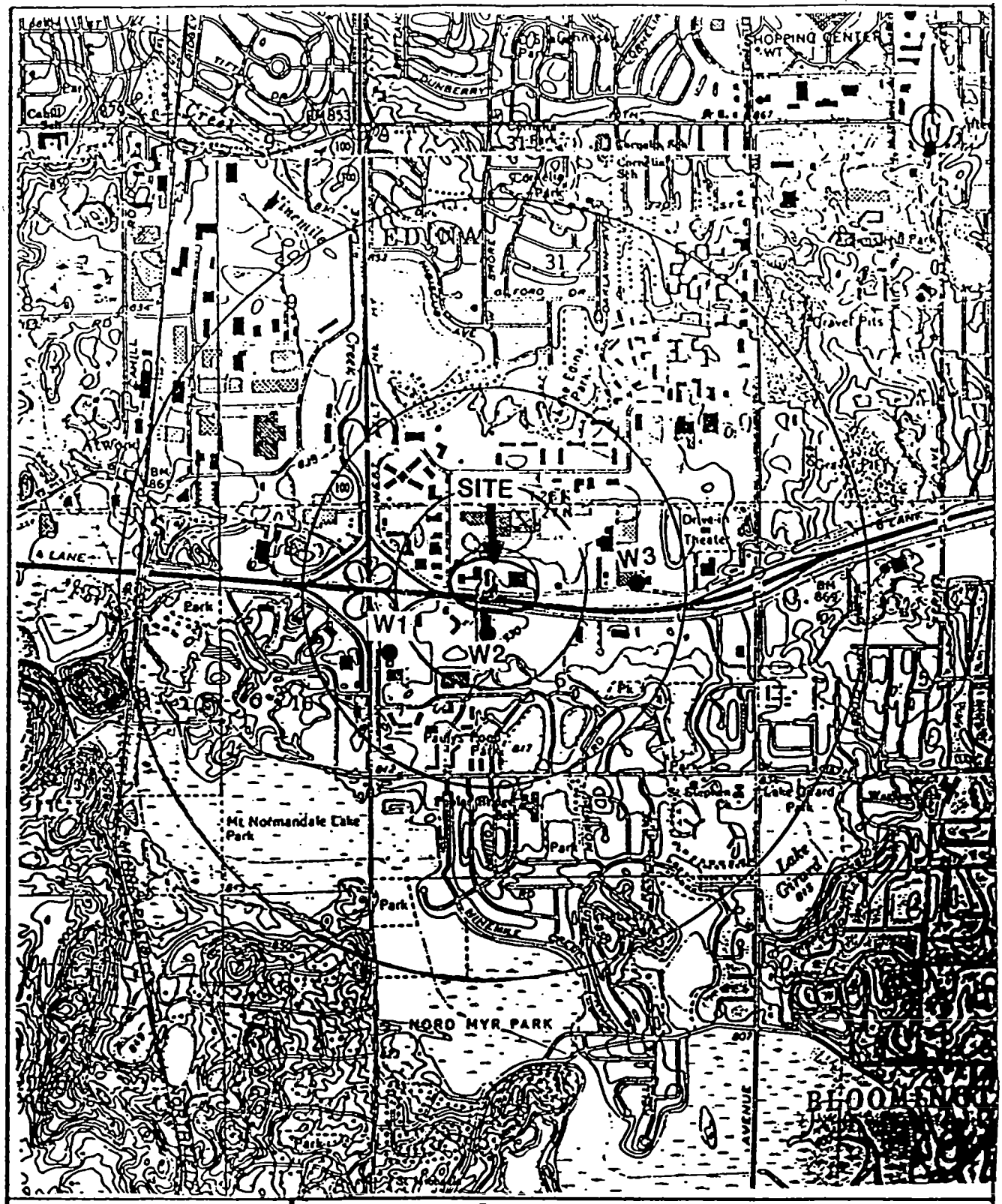
TITLE: PROPOSED SAMPLE LOCATION MAP	FIGURE #: 3
SITE: WEST 78TH CIRCLE SITE	SCALE: N/A
CITY: BLOOMINGTON STATE: MN	P.A.N.: FMN0172GA
SOURCE: MPCA	DATE:
	REVISED:



LEGEND

● INDUSTRIAL/PRODUCTION WELL

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TITLE: PROPOSED SAMPLE LOCATION MAP	FIGURE #: 4.
SITE: WEST 78TH CIRCLE SITE	SCALE: 1:24000
CITY: BLOOMINGTON STATE: MN	P.A.#: FMN0172GA
SOURCE: USGS BLOOMINGTON, MN QUAD	DATE: 1967 REVISED: 1980

HRS WORKSHEETS

Hazard Ranking System 1: Score Worksheets:

PRELIMINARY AND PROJECTED HAZARD RANKING SYSTEM SCORE WORKSHEETS

Site Name: WEST 78TH CIRCLE SITE (Cerclis Name)

(AKA)

Address: 4470 W. 78TH ST.

City/County/State/Zip BLOOMINGTON / HENNEPIN / MN / 55435

Cerclis ID # MND980995872 SSID NONE

Prepared by Daniel Sullivan E&E Date 10-21-88

Reviewed by Kurt Lind E&E Date 10-28-88

TDD: F05-8706-169 PAN FMN0172GA

Type of Document

PA	____
PA Reassessment	____
WP-SSI	X
WP-LSI	____

PRELIMINARY HRS SCORE

S_M= 0 S_{FE}= 0 S_{DC}= 0

PROJECTED HRS SCORE FOR SCREENING SITE INSPECTION (SSI)

S_M= 11.21 S_{FE}= 0 S_{DC}= 0

PROJECTED HRS SCORE FOR LISTING SITE INSPECTION (LSI)

S_M= 33.62 S_{FE}= 0 S_{DC}= 0

PRELIMINARY HRS SCORE

(THIS SCORE IS BASED ON EXISTING FILE INFORMATION THAT WAS OBTAINED PRIOR TO THE SCREENING SITE INSPECTION)

	S	S^2
Groundwater Route Score (S_{gw})	0	0
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_A)	0	0
$S_{gw}^2 + S_{sw}^2 + S_A^2$		
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_A^2}$		
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_A^2} / 1.73 = S_M$		0

PROJECTED HRS SCORE FOR SCREENING SITE INSPECTION (SSI)

(THIS SCORE IS BASED ON THE EXPECTED ACQUISITION OF INFORMATION FROM THE SCREENING SITE INSPECTION)

	S	S^2
Groundwater Route Score (S_{gw})	19.39	375.97
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_A)	0	0
$S_{gw}^2 + S_{sw}^2 + S_A^2$		375.97
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_A^2}$		19.39
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_A^2} / 1.73 = S_M$		11.21

PROJECTED HRS SCORE FOR LISTING SITE INSPECTION (LSI)

(THIS SCORE IS BASED ON THE EXPECTED ACQUISITION OF INFORMATION FROM THE LISTING SITE INSPECTION)

	S	S^2
Groundwater Route Score (S_{gw})	58.16	3382.59
Surface Water Route Score (S_{sw})	0	0
Air Route Score (S_A)	0	0
$S_{gw}^2 + S_{sw}^2 + S_A^2$		3382.59
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_A^2}$		58.16
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_A^2} / 1.73 = S_M$		33.62

GROUNDWATER ROUTE

PRELIMINARY HRS SCORE WORKSHEET

(This score is based on existing file information that was obtained prior to the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	(0) 45	x1	0	NONE OBSERVED	
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics				Aquifer Description: JORDAN	1
Depth to Aquifer of concern	(0) 1 2 3	x2	0	~360 ft.	1
Net Precipitation	0 (1) 2 3	x1	1	Precip 28.41" Evap 30.25"	2
Permeability of the Unsaturated Zone	0 (1) 2 3	x1	1	10^{-6} cm/sec	1
Physical State	0 1 2 (3)	x1	3	SLUDGE	3
	Total Route Char. Score		5		
3 Containment	0 1 2 (3)	x1	3	LEAKING PAILS	4
4 Waste Characteristics					
Persistence / Toxicity	0 1 2 3 0: 0 0 0 0 1: 3 6 9 12 2: 6 9 12 15 3: 9 12 15 18	x1	0	UNKNOWN	
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1	0	UNKNOWN	
	Total Waste Char. Score		0		
5 Targets					
Groundwater Use	0 1 2 (3)	x3	9	DRINKING	1
Distance to Nearest Well	0 1 2 3 4 0: 0 0 0 0 0 1: 0 4 6 8 10 2: 0 8 12 16 20 3: 0 12 18 24 30 4: 0 16 24 32 35			~1.5 MILES	1,5
Population Served	5: 0 20 (30) 35 40	x1	30	~162682	6
	Total Targets Score		39		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 0.00		

GROUNDWATER ROUTE

PROJECTED HRS SCORE WORKSHEET FOR SCREENING SITE INSPECTION (SSI)

(This score is based on the expected acquisition of information from the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	0 45	x1	0		
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics				Aquifer Description: JORDAN	1
Depth to Aquifer of concern	(0) 1 2 3	x2	0	360 ft.	1
Net Precipitation	0 (1) 2 3	x1	1	Precip 28.41" Evap 30.25"	2
Permeability of the Unsaturated Zone	0 (1) 2 3	x1	1	10^{-6} cm/sec	1
Physical State	0 1 2 (3)	x1	3	SLUDGE	3
	Total Route Char. Score		5		
3 Containment	0 1 2 (3)	x1	3	LEAKING PAILS	4
4 Waste Characteristics					
Persistence / Toxicity	0 1 2 3 0: 0 0 0 0 1: 3 6 9 12 2: 6 9 12 15 3: 9 12 15 (18)	x1	18	ASSUME PCBs	3
Haz. Waste Quantity	0 (1) 2 3 4 5 6 7 8	x1	1	~150 GALLONS	3
	Total Waste Char. Score		19		
5 Targets					
Groundwater Use	0 1 2 (3)	x3	9	DRINKING	1
Distance to Nearest Well	0 1 2 3 4 0: 0 0 0 0 0 1: 0 4 6 8 10 2: 0 8 12 16 20 3: 0 12 18 24 30 4: 0 16 24 32 35 5: 0 20 (30) 35 40			~ 1.5 MILES	1,5
Population Served		x1	30	~ 162682	6
	Total Targets Score		39		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			11115		
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 19.39		

GROUNDWATER ROUTE

PROJECTED HRS SCORE WORKSHEET FOR LISTING SITE INSPECTION (LSI)

(This score is based on the expected aquisition of information from the Listing Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Release	0 (45)	x1	45		
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics				Aquifer Description:	
Depth to Aquifer of concern	0 1 2 3	x2		ft.	
Net Precipitation	0 1 2 3	x1		Precip Evap	
Permeability of the Unsaturated Zone	0 1 2 3	x1		cm/sec	
Physical State	0 1 2 3	x1			
	Total Route Char. Score				
3 Containment	0 1 2 3	x1			
4 Waste Characteristics					
Toxicity (Persistence 0 1 2 3; Toxicity 0: 0 0 0 0; 1: 3 6 9 12; 2: 6 9 12 15; 3: 9 12 15 (18))		x1	18	ASSUME PCBs	3
Haz. Waste Quantity	0 (1) 2 3 4 5 6 7 8	x1	1	~ 150 GALLONS	3
	Total Waste Char. Score		19		
5 Targets					
Groundwater Use	0 1 (2) 3	x3	9	DRINKING	1
Distance to Nearest Well				~ 1.5 MILES	1,5
Population Served (0: 0 0 0 0 0; 1: 0 4 6 8 10; 2: 0 8 12 16 20; 3: 0 12 18 24 30; 4: 0 16 24 32 35; 5: 0 20 (30) 35 40)		x1	30	~ 162682	6
	Total Targets Score		39		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			33345		
7 Divide line 6 by 57,330 and multiply by 100			S_{gw} = 58.16		

SURFACE WATER ROUTE

PRELIMINARY HRS SCORE WORKSHEET

(This score is based on existing file information that was obtained prior to the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	(0) 45	x1	0		
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics				Facil 0 %	5
Intervening Terrain / Facility Slope (0 0 0 0 3; 0 1 1 2 3; 0 1 2 2 3; 0 2 2 3 3; 0 2 3 3 3)		x1	0	Interv 0 %	5
1-yr. 24 hr Rainfall	0 1 (2) 3	x1	2	2.35 in.	2
Distance to Nearest Surface Water	0 (1) 2 3	x2	2	~ 1/4 MILE	5
Physical State	0 1 2 (3)	x1	3	SLUDGE	3
Total Route Char. Score			7		
3 Containment	0 1 2 (3)	x1	3	LEAKING PAILS	4
4 Waste Characteristics					
Persistence / Toxicity (0: 0 0 0 0; 1: 3 6 9 12; 2: 6 9 12 15; 3: 9 12 15 18)		x1	0	UNKNOWN	
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1	0	UNKNOWN	
Total Waste Char. Score			0		
5 Targets					
Surface Water Use	0 1 2 3	x3	0	NONE KNOWN	
Dist. to Sensitive Environment	0 1 2 3	x2	0	N/A	
Population Served / Distance to Water Intake Downstream (0 0 0 0 0; 0 4 6 8 10; 0 8 12 16 20; 0 12 18 24 30; 0 16 24 32 35; 0 20 30 35 40)		x1	0	N/A	
Total Targets Score			0		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} =	0		

UNLIKELY THAT SURFACE WATER RELEASE HAS OCCURRED... THE CONTAMINATED AREA OF PROPERTY HAS BEEN PAVED OVER.

SURFACE WATER ROUTE

PROJECTED HRS SCORE WORKSHEET FOR SCREENING SITE INSPECTION (SSI)

(This score is based on the expected acquisition of information from the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	0 45	x1			
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics				Facil %	
Facility Slope / Intervening Terrain	0 0 0 0 3 0 1 1 2 3 0 1 2 2 3 0 2 2 3 3 0 2 3 3 3	x1		Interv %	
1-yr. 24 hr Rainfall	0 1 2 3	x1		in.	
Distance to Nearest Surface Water	0 1 2 3	x2			
Physical State	0 1 2 3	x1			
Total Route Char. Score					
3 Containment	0 1 2 3	x1			
4 Waste Characteristics					
Persistence: 0 1 2 3 / Toxicity: 0: 0 0 0 0; 1: 3 6 9 12; 2: 6 9 12 15; 3: 9 12 15 18		x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
Total Waste Char. Score					
5 Targets					
Surface Water Use	0 1 2 3	x3			
Dist. to Sensitive Environment	0 1 2 3	x2			
Population Served / Distance to Water Intake Downstream: 0: 0 0 0 0 0; 1: 0 4 6 8 10; 2: 0 8 12 16 20; 3: 0 12 18 24 30; 4: 0 16 24 32 35; 5: 0 20 30 35 40		x1			
Total Targets Score					
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5					
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} = 0				

SURFACE WATER ROUTE

PROJECTED HRS SCORE WORKSHEET FOR LISTING SITE INSPECTION (LSI)

(This score is based on the expected aquisition of information from the Listing Site Inspection)

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Release	0 45	x1			
If Observed Release scores 45 proceed to line 4 If Observed Release scores 0 proceed to line 2					
2 Route Characteristics				Facil %	
Facility Slope / Intervening Terrain	0 0 0 0 3 0 1 1 2 3 0 1 2 2 3 0 2 2 3 3 0 2 3 3 3	x1		Interv %	
1-yr. 24 hr. Rainfall	0 1 2 3	x1		in.	
Distance to Nearest Surface Water	0 1 2 3	x2			
Physical State	0 1 2 3	x1			
Total Route Char. Score					
3 Containment	0 1 2 3	x1			
4 Waste Characteristics					
Persistence / Toxicity	0: 0 0 0 0 1: 3 6 9 12 2: 6 9 12 15 3: 9 12 15 18	x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
Total Waste Char. Score					
5 Targets					
Surface Water Use	0 1 2 3	x3			
Dist. to Sensitive Environment	0 1 2 3	x2			
Population Served / Distance to Water Intake Downstream	0 0 0 0 0 0 4 6 8 10 0 8 12 16 20 0 12 18 24 30 0 16 24 32 35 0 20 30 35 40	x1			
Total Targets Score					
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5					
7 Divide line 6 by 64,350 and multiply by 100	S_{sw} = 0				

AIR ROUTE

PRELIMINARY HRS SCORE WORKSHEET

(This score is based on existing file information that was obtained prior to the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	(0) 45	x1	0		
If line 1 is 0, the S_a=0. Enter on line 5					
If line 1 is 45, then proceed to line 2					
2 Waste Characteristics					
Reactivity & Incompatability	0 1 2 3	x1			
Toxicity	0 1 2 3	x3			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
	Total Waste Char. Score				
3 Targets	Dist to Population				
Population within 4-mile Radius	Pop. 0 0 0 0 / 9 12 15 18 / 12 15 18 21 / 15 18 21 24 / 18 21 24 27 / 21 24 27 30	x1			
Distance to Sensitive Environment	0 1 2 3	x2			
Land Use	0 1 2 3	x1			
	Total Targets Score				
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 35,100 and multiply by 100			S_a = 0		

NO AIR DATA AVAILABLE

AIR ROUTE

PROJECTED HRS SCORE WORKSHEET FOR SCREENING SITE INSPECTION (SSI)

(This score is based on the expected acquisition of information from the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	(0) 45	x1	0		
If line 1 is 0, the S_a=0. Enter on line 5 If line 1 is 45, then proceed to line 2					
2 Waste Characteristics					
Reactivity & Incompatability	0 1 2 3	x1			
Toxicity	0 1 2 3	x3			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
	Total Waste Char. Score				
3 Targets					
Population within 4-mile Radius	Dist to Population Pop: 0 0 0 0 / 9 12 15 18 / 12 15 18 21 / 15 18 21 24 / 18 21 24 27 / 21 24 27 30	x1			
Distance to Sensitive Environment	0 1 2 3	x2			
Land Use	0 1 2 3	x1			
	Total Targets Score				
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 35,100 and multiply by 100			S_a = 0		

NO AIR MONITORING WILL BE DONE AT THIS TIME.

AIR ROUTE

PROJECTED HRS SCORE WORKSHEET FOR LISTING SITE INSPECTION (LSI)

(This score is based on the expected aquisition of information from the Listing Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Release	(0) 45	x1	0		
If line 1 is 0, the S_a=0. Enter on line 5 If line 1 is 45, then proceed to line 2					
2 Waste Characteristics					
Reactivity & Incompatability	0 1 2 3	x1			
Toxicity	0 1 2 3	x3			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
	Total Waste Char. Score				
3 Targets	Dist to Population				
Population within 4-mile Radius	Pop. 0 0 0 0 / 9 12 15 18 / 12 15 18 21 / 15 18 21 24 / 18 21 24 27 / 21 24 27 30	x1			
Distance to Sensitive Environment	0 1 2 3	x2			
Land Use	0 1 2 3	x1			
	Total Targets Score				
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 35,100 and multiply by 100			S_a = 0		

INSUFFICIENT INFORMATION TO SCORE THIS ROUTE AT THIS TIME.

FIRE AND EXPLOSION

PRELIMINARY HRS SCORE WORKSHEET

(This score is based on existing file information that was obtained prior to the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Containment	0 3	x1			
2 Waste Characteristics					
Direct Evidence	0 3	x1			
Ignitability	0 1 2 3	x1			
Reactivity	0 1 2 3	x1			
Incompatability	0 1 2 3	x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
	Total Waste Char. Score				
3 Targets					
Dist. to Nearest Pop.	0 1 2 3 4 5	x1			
Dist. to Nearest Bldg.	0 1 2 3	x1			
Dist. to Sensitive Env.	0 1 2 3	x1			
Land Use	0 1 2 3	x1			
Pop. Within 2 miles	0 1 2 3 4 5	x1			
Bldgs. Within 2 miles	0 1 2 3 4 5	x1			
	Total Targets Score				
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} = 0		

UNLIKELY THAT FIRE AND EXPLOSION HAZARD EXISTS... THE CONTAMINATED AREA OF PROPERTY HAS BEEN PAVED OVER.

FIRE AND EXPLOSION

PROJECTED HRS SCORE WORKSHEET FOR SCREENING SITE INSPECTION (SSI)

(This score is based on the expected acquisition of information from the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Containment	0 3	x1			
2 Waste Characteristics					
Direct Evidence	0 3	x1			
Ignitability	0 1 2 3	x1			
Reactivity	0 1 2 3	x1			
Incompatability	0 1 2 3	x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
	Total Waste Char. Score				
3 Targets					
Dist. to Nearest Pop.	0 1 2 3 4 5	x1			
Dist. to Nearest Bldg.	0 1 2 3	x1			
Dist. to Sensitive Env.	0 1 2 3	x1			
Land Use	0 1 2 3	x1			
Pop. Within 2 miles	0 1 2 3 4 5	x1			
Bldgs. Within 2 miles	0 1 2 3 4 5	x1			
	Total Targets Score				
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} = 0		

FIRE AND EXPLOSION

PROJECTED HRS SCORE WORKSHEET FOR LISTING SITE INSPECTION (LSI)

(This score is based on the expected acquisition of information from the Listing Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Containment	0 3	x1			
2 Waste Characteristics					
Direct Evidence	0 3	x1			
Ignitability	0 1 2 3	x1			
Reactivity	0 1 2 3	x1			
Incompatability	0 1 2 3	x1			
Haz. Waste Quantity	0 1 2 3 4 5 6 7 8	x1			
	Total Waste Char. Score				
3 Targets					
Dist. to Nearest Pop.	0 1 2 3 4 5	x1			
Dist. to Nearest Bldg.	0 1 2 3	x1			
Dist. to Sensitive Env.	0 1 2 3	x1			
Land Use	0 1 2 3	x1			
Pop. Within 2 miles	0 1 2 3 4 5	x1			
Bldgs. Within 2 miles	0 1 2 3 4 5	x1			
	Total Targets Score				
4 Multiply 1 x 2 x 3					
5 Divide line 4 by 1,440 and multiply by 100			S_{FE} = 0		

DIRECT CONTACT

PRELIMINARY HRS SCORE WORKSHEET

(This score is based on existing file information that was obtained prior to the Screening Site Inspection)

Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Description	Ref. #
1 Observed Incident	(0) 45	x1	0	NONE OBSERVED	
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	x1	3	NO BARRIERS	3
3 Containment	(0) 15	x1	0	PAVED OVER	
4 Waste Characteristics					
Toxicity	(0) 1 2 3	x5	0	UNKNOWN	
5 Targets					
Pop. Within 1 mile	0 1 2 3 (4) 5	x4	16	~8046	5,6
Dist. to Crit. Habitat	(0) 1 2 3	x4	0	N/A	
Total Targets Score			16		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 0.00		

DIRECT CONTACT

PROJECTED HRS SCORE WORKSHEET FOR SCREENING SITE INSPECTION (SSI)

(This score is based on the expected acquisition of information from the Screening Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Incident	0 45	x1	0		
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	x1	3	NO BARRIERS	3
3 Containment	(0) 15	x1	0	PAVED OVER	
4 Waste Characteristics					
Toxicity	0 1 2 (3)	x5	15	ASSUME PCB's	3
5 Targets					
Pop. Within 1 mile	0 1 2 3 (4) 5	x4	16	~8046	5,6
Dist. to Crit. Habitat	(0) 1 2 3	x4	0	N/A	
Total Targets Score			16		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 0.00				

DIRECT CONTACT

PROJECTED HRS SCORE WORKSHEET FOR LISTING SITE INSPECTION (LSI)

(This score is based on the expected acquisition of information from the Listing Site Inspection.)

Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Description	Ref. #
1 Observed Incident	(0) 45	x1	0		
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 (3)	x1	3	NO BARRIERS	3
3 Containment	(0) 15	x1	0	PAVED OVER	
4 Waste Characteristics					
Toxicity	0 1 2 (3)	x5	15	ASSUME -PCBs	3
5 Targets					
Pop. Within 1 mile	0 1 2 3 (4) 5	x4	16	~8046	5,6
Dist. to Crit. Habitat	(0) 1 2 3	x4	0	N/A	
	Total Targets Score		16		
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0		
7 Divide line 6 by 21,600 and multiply by 100			S_{OC}= 0.00		

Hazard Ranking System 2: Factor Value Worksheets

HRS 2- FACTOR VALUE

Factor	Factor Value		Observed Human Exposure (X)
Waste Characteristics	0	(100)	
Air Pathway	32.20	(100)	
Groundwater Pathway	53.22	(100)	
Surface Water Pathway	0	(100)	
On-site Pathway	70.00	(100)	
TOTAL HRS 2 FACTOR VALUE	155.42	(500)	

WASTE CHARACTERISTICS

	Yes (x)	Reference	Factor Value
1. (a) Are CONTAINERS open, unsealed, or non-intact?	—	_____	0 (5)
(b) Is there evidence of contaminant migration away from the containers?	—	_____	0 (5)
(c) Is the source(s) unlined or does it have unsound diking?	—	_____	0 (5)
2. (a) Does the LANDFILL have exposed waste, or is the landfill uncovered, or is the landfill covered with contaminated soil, non-intact cover or cover less than 1 inch?	—	_____	0 (5)
(b) Is there evidence of contaminant migration away from the source?	—	_____	0 (5)
(c) Is there an absence of a liner, a run-on or runoff management system or leachate collection and removal system?	—	_____	0 (5)
3. (a) Is the SURFACE IMPOUNDMENT wet and non-enclosed?	—	_____	0 (5)
(b) Is there evidence of contaminant migration away from the source?	—	_____	0 (5)
(c) Is there no liner or diking?	—	_____	0 (5)
4. (a) Is the PILE uncovered, or is the pile covered with contaminated soil, non-intact cover or cover less than 1 inch?	—	_____	0 (5)
(b) Is there an absence of a functioning run-on or runoff management system or leachate collection system?	—	_____	0 (5)
(c) Is there an absence of a liner?	—	_____	0 (5)
5. Only answer highest factor value for the following questions:			
(a) Is constituent data available for waste?	—	_____	0 (10)
(b) Is waste quantity as deposited information available?	—	_____	0 (8)
(c) Is disposable volume known?	—	_____	0 (4)
(d) Is disposable area known?	—	_____	0 (2)

...Continued

WASTE CHARACTERISTICS (Continued)

6. Complete the table for all sources at the site. Calculate Waste Quantity score and record summation to a maximum value of 30.

Source	Surface Area (ft2)	÷	Divisor	=	Waste Quantity Score
Pile		÷	85	=	
Drums/Non-drum Container		÷	233	=	
Surface Impoundment		÷	375	=	
Land Treatment		÷	27,000	=	
Landfill		÷	85,666	=	
Contaminated Soil		÷	1,125,000	=	

Total 0 0 (30max)

Total Waste Characteristics 0 (100)

AIR PATHWAY

	Yes (x)	Reference	Factor Value
1. Only assign factor value for (a) or (b), choosing the higher value:			
(a) Is there a residence or regularly occupied building between 0 to 1/8 mile from a potential source(s)?	X	5	25 (25)
(b) Is there a residence or regularly occupied building between 1/8 to 2 miles from a potential source(s)?	—		0 (5)
2. Complete (a) and (b) and assign the higher factor value:			
(a) If documented contamination of air, answer yes and assign factor value of 75.	—		0 (75)
(b) Calculate potential population and assign factor value as given below:			

Distance (mile)	Population	x	Distance Weighting Factor	=	Subtotal
Onsite	UNKNOWN	x	1.682	=	—
0-1/4	575	x	0.323	=	185.73
1/4-1/2	1573	x	0.056	=	88.09
1/2-1	5898	x	0.017	=	100.27
1-2	18346	x	0.005	=	91.73
2-3	45024	x	0.003	=	135.07
3-4	59329	x	0.002	=	118.66

Total 719.55 x $\frac{1}{100}$ = 7.20 (75max)

Total Air Pathway Value 32.20 (100)

GROUNDWATER PATHWAY

	Yes (x)	Reference	Factor Value
1. Is the depth to the aquifer of concern less than 800 feet?	X	1	5 (5)
2. (a) Within 2 miles of the site, is the geologic material between the waste and the aquifer of concern composed predominantly of sands, gravels, sandstone, limestone or dolomite?	—		0 (5)
(b) Within 2 miles of the site, is there evidence of a low hydraulic conductivity layer (10^{-6} to 10^{-9}) between the waste and the aquifer of concern?	—		0 (-15)
3. Only assign factor score for (a) or (b), choosing the higher value: (a) Is there a drinking water well(s) in the aquifer of concern or a more shallow unit 0 to 1/2 mile from the source(s)?	—		0 (20)
(b) Is there a drinking water well(s) in the aquifer of concern or a more shallow unit 1/2 to 2 miles from the source(s)?	X	1,5	5 (5)
4. Is the aquifer of concern a karst unit?	—		0 (10)
5. Is the aquifer of concern a sole source aquifer?	—		0 (5)
6. Complete (a) and (b), and assign the higher factor value: (a) If documented contamination of drinking water wells with TCL compounds, answer yes and assign a factor value of 50.	—		0 (50)
(b) Calculate potential population and assign factor value as given below:	—		

Distance (mile)	Population	x	Distance Weighting Factor	=	Subtotal
0-1/4	575	x	0.25	=	143.75
1/4-1/2	1573	x	0.16	=	251.68
1/2-1	5898	x	0.08	=	471.84
1-2	18346	x	0.05	=	917.30
2-3	45024	x	0.03	=	1350.72
3-4	59329	x	0.02	=	1186.58

Total 4321.87 x 1/100 = 43.22 (50max)

53.22 (100)

SURFACE WATER PATHWAY

	Yes (x)	Reference	Factor Value
1. Does site lie within a 100-year or less floodplain?	—		0 (5)
2. Is there contamination attributable to the site at a drinking water intake?	—		0 (20)
3. Is this a sole-source surface water supply?	—		0 (10)
4. Is a fishery (production) contaminated as a result of the site, or is a fishery potentially impacted within 15 miles as a result of the site?	UNK		0 (5)
5. Is a recreation area contaminated as a result of the site, or is a recreation area potentially impacted within 15 miles as a result of the site?	—		0 (5)
6. Is a sensitive environment contaminated as a result of the site, or is a sensitive environment potentially impacted within 15 miles as a result of the site?	—		(5)
7. Complete (a) and (b), and assign the higher factor value:			
(a) If there is documented contamination of a surface water intake with TCL compounds answer yes and assign a factor value of 50.	—		0 (50)
(b) Calculate potential population and assign a factor value as given below:	—		

Intake	Population	x	* Dilution Weighting Factor	=	Subtotal
#1		x		=	
#2		x		=	
#3		x		=	
		x		=	
		x		=	
		x		=	

* Use table on following page.

Total 0 x 1/100 = 0 (50max)

TOTAL SURFACE WATER PATHWAY VALUE 0 (100)

SURFACE WATER PATHWAY

TABLE

DILUTION WEIGHTING FACTORS

Surface Characteristic	Average Annual Flow in Cubic Feet per Second (CFS)	Assigned Value
Minimum perennial stream	Less than 5 cfs	2.5
Small to moderate stream	5 to 50 cfs	0.25
Moderate to large stream	Greater than 50 to 500 cfs	0.025
Large streams to rivers	Greater than 500 to 10,000 cfs	0.0013
Major rivers	Greater than 10,000 cfs	0.0003
Ocean or the Great Lakes	Not applicable	0.0003
Mixing zone of quiet flowing rivers	Greater than 50 cfs	0.125
Lakes, reservoirs	Add and average CFS of tributaries flowing into lake/reservoir.	Assign value to calculated CFS figure using above factors.

ON-SITE PATHWAY

	Yes (x)	Reference	Factor Value
1. Is the site located in an area where people live or go to school within 1 mile of the source(s)? *If answer NO to Question 1, do not proceed with the remaining questions.	X	5	10 (10)
2. Is there known contamination from the site on residential or school property?	—	—	0 (15)
3. Is site public use land or widely used land without barriers?	X	7	10 (10)
4. Complete (a), (b) and (c), and assign the highest factor value: Which of the following are adjacent to site/source(s) or contaminated from the site?			
(a) Schools, day-care	—	—	0 (15)
(b) Parks, playgrounds, residences	—	—	0 (10)
(c) National park, federal endangered species, other public-use lands.	—	—	0 (5)

5. Calculate population within 1 mile of the site, and assign factor value as given below:

Distance (mile)	Population	x	Distance Weighting Factor	=	Subtotal
0-1/4	575	x	0.05	=	28.75
1/4-1/2	1573	x	0.025	=	39.33
1/2-1	5898	x	0.0125	=	73.73

Total 141.81 50 (50max)

TOTAL ON-SITE PATHWAY VALUE 70.00 (100)

APPENDIX

REFERENCES

SOURCES AND DATES OF INFORMATION COLLECTION

SOURCE	DATE
1) State Hazardous/Solid Waste Files	
2) State Water Files	
3) State Air Files	
4) State Department of Health	
5) State Geological Survey	
6) State Department of Natural Resources	
7) State Fire Marshall	
8) County Department of Health	
9) County Engineer	
10) County Clerk/Recorder of Deeds	
11) City Department of Health	
12) City Engineer	
13) City Fire Department/Fire Marshall	
14) City Water/Sever Department	10-12, 10-13-88
15) U.S. Soil Conservation Service	
16) Others	

STATE CONTACT(S): RON SWENSON (name) — (612) 297-1793 (phone number)

ELIZABETH A. GAWRYS (name) — (612) 297-1796 (phone number)

REFERENCE DOCUMENTATION SHEET

Ref.#	DESCRIPTION OF REFERENCE
1	MINNESOTA GEOLOGICAL SURVEY MUNICIPAL WELL LOGS; BLOOMINGTON AND EDINA, MN.
2	U.S. DEPT. OF COMMERCE; GOVT. PRINTING OFFICE, 1963. RAINFALL FREQUENCY ATLAS. TECHNICAL PAPER # 40, WASHINGTON, D.C. PP 43 AND 68.
3	POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT; WEST 78TH CIRCLE SITE. ELIZABETH A. GAWRYS, MPCA, 12-13-84.
4	LETTER FROM LARRY HOSKINS, TORRE CONSTRUCTION CO., TO JOHN K. NELSON, DEPT. OF COMMUNITY DEVELOPMENT, 8-20-84.

REFERENCE DOCUMENTATION SHEET

Ref.#	DESCRIPTION OF REFERENCE
5	USGS TOPOGRAPHIC MAP, BLOOMINGTON, MN, QUADRANGLE, 7.5 MINUTE SERIES, 1967 REV. 1980.
6	1980 CENSUS OF POPULATION, U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS.
7	LETTER FROM JOHN M. HUNT, BLACK ANGUS ENTERPRISES TO ELIZABETH GAWRYS, MPCA, 10-31-84.

Copies of the following addenda have been supplied to the U.S. Environmental Protection Agency and the appropriate state agencies. Refer to these addenda when reviewing this work plan.

Addendum	Title
A	Routine Analytical Services Contract Required Detection and Quantitation Limits
B	Central Regional Laboratory Detection Limits
C	Special Analytical Services Detection Limits Drinking Water Samples
D	Special Analytical Services Detection Limits High Concentration Samples